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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,524	12/12/2003	Jean Cotteret	LORE:003US	1582

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Mark B. Wilson  
Fulbright & Jaworski L.L.P.  
Suite 2400  
600 Congress Avenue  
Austin, TX 78701

EXAMINER
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ELHILO, EISA B

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/735,524	Applicant(s) COTTERET ET AL.	
	Examiner Eisa B Elhilo	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11 and 22-69 is/are rejected.
- 7) ☒ Claim(s) 9 and 12-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/28/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

Claims 1-69 are pending in this application.

### DETAILED ACTION

#### Examiner position

1 The examiner makes of record that instant claims 35, 47, 55, 56, 61 and 64 recite a broad range followed by a series of narrow ranges. For examination purposes, the examiner asserts that the narrow ranges recited in the instant claims 35, 47, 55, 56, 61 and 64 merely exemplary ranges, and thus, the prior art will be applied against the broadest range recited in the instant claims 35, 47, 55, 56, 61 and 64. Further, the examiner suggests that applicant should delete the narrow ranges from the instant claims 35, 47, 55, 56, 61 and 64 and add new dependent claims that recite the narrow ranges recited in the instant claims 35, 47, 55, 56, 61 and 64.

#### *Claim Rejections - 35 USC § 103*

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10-11, 22-47 and 55-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laurent et al. (US 2002/0046431 A1) in view of Lim et al. (US 6,461,391 B1).

Laurent et al. (US' 431 A1) teaches a hair dyeing composition comprising oxidation bases such as para-phenylenediamine compounds represented by a formula (1), in which R1 and R2 form together with the nitrogen to which they attached a 5- or 6-membered nitrogen-containing heterocyclic ring (see page. 10, formula (1) and page 12, paragraph, 0270) and wherein the composition further comprises, cationic polyurethane of a formula (Ia), which is

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similar to the claimed formula (Va) and wherein the reference's formula (Ia) has all the limitations of the claimed formula (Va) as claimed in claims 27-35 (see pages 2-5), wherein the cationic polymer is a quaternized cellulose polymer containing a fatty alcohol as claimed in claims 36-37 (see page 2, paragraph, 0062), wherein the cationic polymer is a cationic polyvinylpyrrolidone containing fatty chain having the formulae (Ib) and (IIB) which are similar to the claimed formulae (I) and (II) and wherein the reference's formulae (Ib) and (Iib) have all the limitations of the claimed formulae (I) and (II) as claimed in claims 38-45 (see page 6-7), wherein the cationic polyvinylpyrrolidone polymer is a vinylpyrrolidone/dimethylaminopropylmethacrylamide/dodecyldimethylmethacrylamidopropylammonium tosylate as claimed in claim 46 (see page 7, paragraph, 0190), wherein the weight-ratio molecular mass of the cationic polyvinylpyrrolidone polymer is between 500 and 20 000 000, 200 000 and 2000 000 or 400 0000 and 800 000 as claimed in claim 47 (see page 7, paragraph, 0192), additional cationic polymers as claimed in claim 57 (see page 7, paragraph, 0192), thickeners and surfactants as claimed in claims 58-59 (see page 21, paragraph, 0466), other oxidation bases such as para-aminophenol as claimed in claim 60 (see page 12, formula (III)), wherein the oxidation bases are presented in the amount of 0.0005% to 12% which is within the claimed range as claimed in claim 61 (see page 13, paragraph, 0312), couplers such as 1,3-dihydroxybenzene (meta-diphenol) in the amount of 0.005 to 5% as claimed in claims 62-64 (see page 13, paragraph, 0314), direct dyes as claimed in claim 65 (see page 13, paragraph, 0317), hydroxylated solvents such as ethanol as claimed in claim 66 (see page 10, paragraph, 0254), oxidizing agents such as hydrogen peroxide as claimed in claim 67 (see page 21, paragraph, 0469). Laurent et al. also teaches a similar process for dyeing hair comprising

applying to the hair the dyeing composition as described above and wherein the process is similar to those as claimed in claim 68 (see page 22, paragraph, 0477). Laurent et al. further, teaches multi-compartment devices for dyeing hair, which are similar to those, claimed in claim 69 (see page 27, claim 66).

The claims differ from the reference by reciting cationic tertiary para-phenylenediamine compounds as oxidation bases.

Lim et al. (US' 391 B1) in analogous art of hair dyeing formulation, teaches a composition comprising oxidation base of cationic tertiary para-phenylenediamine having a formula (1), which is similar to the claimed formula (1), when in the reference formula (1), R, R1 and R2 are alkyl radicals, R4 is hydrogen atom or an alkyl radical and R5 is a hydrogen atom (see col. 2, lines 44-50) and when in the claimed formula (1), R2 represents the onion radical Z of the claimed formula (II), R3 is a hydrogen atom, n is 1 or 0 and R1 is an alkyl radical. The cationic tertiary para-phenylenediamine is represented in the amount of 0.01 to about 5.0%, which is within the claimed range as claimed in claims 55-56 (see col. 3, lines 43-46). Lim et al. further, teaches the compounds 1-(4-aminophenyl)-N,N-dimethyl-N-pentylpyrrolidin-3-ammonium iodide and 1-(4-aminophenyl)-N-(2-hydroxyethyl)-N,N-dimethylpyrrolidin-3-ammonium iodide which are structurally similar to the claimed compounds as claimed in claims 22-26 (see col. 19, Example 22 (compound 7) and col. 26, Example 29 (compound 14)).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to formulate such a dyeing composition by substituting the heterocyclic para-phenylenediamine oxidation base of Laurent et al. by the cationic tertiary para-phenylenediamines as taught by Lim et al., with a reasonable

expectation of success. Such a modification would be obvious because Laurent et al. as a primary reference discloses the genus of para-phenylenediamine compounds as oxidation bases. Lim et al. as a secondary reference clearly teaches that the quaternized pyrrolidine compounds are suitable primary intermediates for hair coloring compositions for providing good oxidative coloration of hair such as light fastness, fastness to shampooing, fastness to permanent wave treatment and suitable for providing a wide variety of different color shades with various primary intermediate and coupler compounds (see col. 2, lines 13-20) and, thus, a person of the ordinary skill in the art would be motivated to substitute para-phenylenediamine oxidation bases of Laurent et al. by the cationic tertiary para-phenylenediamines of Lim et al., for providing good oxidation coloring of hair and would expect such a composition to have similar properties to those claimed, absent unexpected results.

3        Claims 48-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laurent et al. (US 2002/0046431 A1) and Lim et al. (US 6,461,391 B1) and further, in view of Cottard et al. (US 2001/0023514 A1).

The disclosures of Laurent et al. (US' 431 A1) and Lim et al. (US' 391 B1), as described above do not teach or disclose the anionic amphiphilic polymers with their descriptive monomers as claimed.

However, Laurent et al. (US' 431 A1) teaches a dyeing composition comprising anionic polymers (see page 21, paragraph, 0466).

Cottard et al. (US' 514 A1) in analogous art of hair dyeing formulation, teaches a composition comprising anionic amphiphilic polymers containing at least one hydrophilic unit formed from (C10-C30)alkyl esters such as lauryl methacrylate and acrylic acid as claimed in

claims 48-50 (see page 3, paragraphs, 0052-0057), wherein the anionic polymer comprising at least one hydrophilic unit and at least one ally ether unit containing fatty chain corresponds to the formula (I) which is similar to the claimed formula (I) as claimed in claims 51-53 (see page 2, paragraphs 0044 and 0045).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to formulate such a dyeing composition by incorporating the anionic amphiphilic polymers as taught Cottard et al., in the dyeing composition of Laurent et al., with a reasonable expectation of success. Such a modification would be obvious because Laurent et al. as a primary reference suggests the use of anionic polymers in the dyeing composition. Cottard et al. as a secondary reference clearly teaches that polymers containing at least one fatty chain providing good oxidative coloration of hair such as light fastness, fastness to shampooing, fastness to permanent wave treatment and suitable for providing more chromatic shades (see page 1, paragraph, 0007) and, thus, a person of the ordinary skill in the art would be motivated to incorporate the anionic amphiphilic polymers of Cottard et al. in the composition of Laurent et al., for providing good oxidation coloring of hair and would expect such a composition to have similar properties to those claimed, absent unexpected results.

#### *Allowable Subject Matter*

4 Claims 9 and 12-21 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record do not teach or disclose cationic para-phenylenedimanie compounds of the claimed formula (II), in which x is equal 1. the prior art of

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record also do not teach or disclose para-phenylenedimanie compounds of the claimed formulae (III) and (IV).

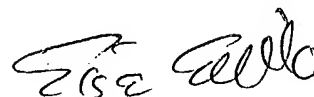
### *Conclusion*

The references listed on from 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (571) 272-1315. The examiner can normally be reached on M - F (8:00 -5:30) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eisa Elhilo  
Patent Examiner  
Art Unit 1751

November 10, 2004